

## A New Genus and Species of Naucorid from South America (Hemiptera)

By IRA LA RIVERS<sup>1</sup>

Subfamily NAUCORINAE (Stål) 1876

Division *Naucoraria*, Stål, 1876: 142. Subfamily *Naucorinae*, Montandon, 1897: 125; / 1909A: 55; / 1909B: 316. Subfamily *Naucorinae*, Champion, 1900: 360. Subfamily *Naucorinae*, Bueno & Brimley, 1907: 434. Subfamily *Naucorinae*, Van Duzee, 1917: 457. Subfamily *Naucorinae*, Usinger, 1937: 299; / 1941: 8. Subfamily *Naucorinae*, La Rivers, 1949 (1948): 371; / 1953: 84.

### PLACOMERUS genus novum<sup>2</sup>

The characteristics of *Placomerus* which distinguish it from the genus *Pelocoris*, which it superficially resembles, can be conveniently set forth in couplet form:

Propleura not raised from the prosternal floor, and not free from the prosternum, about on an even plane with the tubular median sclerite which lies posterior to the prosternum. Legs robust. Mesofemora greatly flattened dorso-ventrally, their dorso-posterior<sup>3</sup> margins extended into thickened, flap-like projections and equipped with fine brush; as a consequence of this dorso-posterior marginal elongation caudally, the ventro-posterior margin is offset cephalad and appears as a line of prominent but short, thickly set reddish spines; meso-femoral widths always more than 30% of their lengths. Mesotibiae short and stout, their widths always more than 20% of their lengths; no suggestion of definite transverse rows of spines at distal tips, the spination here the same as that occurring over remainder of tibiae. Metafemora not proportionately as broad as those of the midlegs, their widths always, however, more than 25% of their lengths; no distinctive transverse terminal spination. Meso- and meta-coxae, particularly the former, with large, weakly curved reddish spines. Meso- and meta-trochanters, particularly the former, with distinct

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<sup>2</sup> πλάξ, flat and μηρός, thigh, referring to the characteristically flattened construction of the middle and hind legs.

<sup>3</sup> Leg oriented at right angles to the long axis of the body.

angulations at postero-lateral corners, breaking an otherwise smooth union with the corresponding faces of the femora. Metalegs with femora longer than tibiae. Tarsi of meso- and meta-legs (with claws) longer than their corresponding tibiae. Male basal edeagal plates complex in full outline (see illustration). Female first valvae broad at base, narrowing rapidly to long, tooth-like, slightly incurving, points; second valvae united into a long, narrow, organ equipped with short, blunt tubercles along lateral margins, and with irregularly spaced median tubercles, all placed toward the tip (genotype *Placomerus micans*) ..... *Placomerus*

Propleura raised and free from the prosternal floor at postero-internal margins, the tubular median sclerite posterior to the prosternum, as a consequence, having a sunken appearance. Legs slim. Mesofemora not flattened or margined as described for *Placomerus*; mesofemoral widths never 30% of their lengths. Mesotibiae long and slim, their widths never 20% of their lengths; as in the genus *Ambrysus*, and others, the distal tips always have one or more distinctly characteristic transverse terminal rows of spines, thickly set across the tibiae which contrast with the usual longitudinal spination present along the tibial lengths. Metafemoral widths never 25% of their lengths. Meso- and meta-coxae with tiny reddish spines, reduced in size so as to be little else than tubercles. Meso- and meta-trochanters with no conspicuous angulation at postero-lateral corners, forming an essentially smooth outline at their union with the posterior margin of the femora. Metalegs with femora shorter than, or subequal in length to, the tibiae. Tarsi of meso- and metalegs (with claws) shorter than their corresponding tibiae. Male basal edeagal plates simple in full outline (see illustration). Female first valvae non-toothlike, being moderately broad thin structures, heavily spined on their external (ventral) convex surfaces; second valvae united into a broad, flat organ only microspinulate (genotype *Pelocoris femoratus* (Palisot de Beauvois) 1805) ..... *Pelocoris*

From *Ambrysus*, the only other major genus in its area, *Placomerus* can be separated on a number of points. The superficial, but traditional setting of the posterior part of the head into a corresponding well in the median anterior outline of the pronotum will set *Ambrysus* apart from *Placomerus* in the great majority of cases, but it is now apparent that this characteristic will have to be abandoned as a means of diagnosis for

the genus *Ambrysus* since some material is known in which this does not hold true. More specific but less well known differences involve the genitalia, as in the cases of *Placomerus* and *Pelocoris* above. The male basal edeagal plates of *Ambrysus* are generally simple in outline, but in some South American species become more complex in that the plate may become almost horseshoe-shaped. However, no known Ambrysi approach *Placomerus* in basal edeagal plate structure.

In the case of the female differences, the first valvae of Ambrysi generally are more like narrow versions of the *Pelocoris* first valvae and bear no resemblance to the construction of these organs in *Placomerus*. The same holds true for the second valvae. And finally, the legs of Ambrysi are essentially indistinguishable from those of *Pelocoris*, and so immediately differentiated from *Placomerus* legs.

The genus *Cryphocricos* in this area is so divergent from the above types that comparative notes are superfluous.

Oddly enough, in casting about for relatives of *Placomerus*, an European genus stands out as exhibiting more of the typical features of these small naucorids than any other group known to me. While *Placomerus* is, from the dorsal surface, a *Pelocoris* at first glance, attention to the ventral and genitalic details shows a pronounced incongruity existing between *Placomerus* and all its American naucorid congeners, most decided in the case of the legs, which exhibit none of the proportions or details of other American species.

*Ilyocoris cimicoides* (Linnaeus) is a large naucorid averaging 13–14 mm. in length and widespread in the palearctic. It is currently placed in the subfamily Naucorinae, where probably neither it nor *Placomerus* belong.<sup>4</sup> Despite the disparity in size, which is not important, these two genera resemble each other more closely than either does anything else in the family on the following points:

<sup>4</sup> Evidence is accumulating to suggest that there is less basic difference between the genera *Pelocoris* and *Ambrysus* than previously thought—these two seem to be more closely allied to each other than do other elements in the Naucorinae as now accepted. It is more logical to place *Ambrysus* in the Naucorinae than it is to retain *Ilyocoris* there.

- (1) Proportions of the labrum (longer in relation to width than is the case in *Pelocoris*);
- (2) Structure of the prothoracic ventra (propleural-prosternal relationships, less pronounced prosternal ridge, etc.);
- (3) Proportions and spination of the legs (the most striking agreement);
- (4) Narrowness of the pronotum (i.e., along the lateral axis).

No relationships can be postulated, with my present material, either between these two genera, or others, on the basis of male genitalia. The basal edeagal plates of both *Placomerus* and *Ilyocoris* are complex in different patterns. In the matter of accessory female structures, *Placomerus* stands pretty much alone in the shape of its first valvae; these structures are quite similar between *Pelocoris* and *Ilyocoris*. *Placomerus*, it can be suggested, probably lays its eggs in plant tissues or in tight cracks in submerged vegetation, while the other two genera appear to have ovipositors so constructed as to make the insertion of eggs into plant tissues difficult. *Naucoris* likewise shows close agreement with *Pelocoris* and *Ilyocoris* in the matter of the first and second female valvae, the specimens I have dissected being broader versions of *Pelocoris* in this respect. However, the above remarks anent relationships are still only tentative, since a great deal more needs to be known about the comparative anatomy of these naucorids before conclusions could be reached.

#### ***Placomerus micans* species novum**

*General appearance:* A small species, 6.5–7.0 mm. long and 3.5–4.0 mm. wide, only very slightly larger than *Pelocoris minutus* Montandon 1895. Predominantly a dark colored species, somewhat lighter anteriorly, highly polished overall and strongly convex.

*Head:* Yellow-brown in color, profusely brown-dotted. Eyes convergent posteriorly and anteriorly (i.e., inner edges curved), with no suggestion of elevation above the plane of the head sur-

face when viewed obliquely from behind; lateral and posterior edges of eyes forming perfectly smooth, curving unions with no suggestions of angulation. Labrum wider than long, triangular-shaped and merging to a broad point in front; length-to-width ratio 25:50 (50%), whitish-yellow in color. Mouthparts darkening toward tip. Antennae short, undistinctive, three-segmented. Head ratios are:

- (1) Total length to width (including eyes) 35:58 (60%)
- (2) Anterior distance between eyes to posterior distance 23:30 (77%)
- (3) Anterior distance between eyes to inner eye length 23:30 (77%).

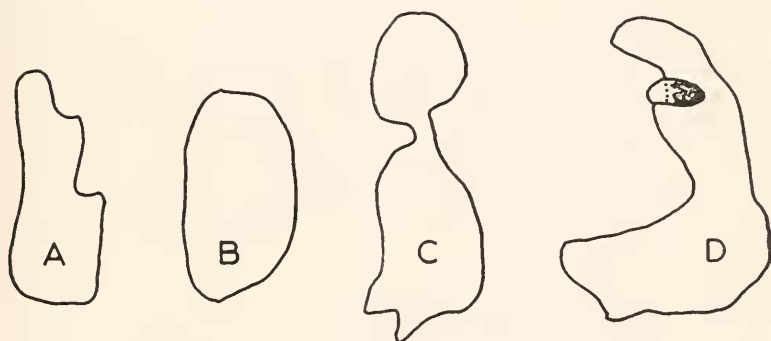


FIGURE 1

- A. Basal edeagal plate of *Placomerus micans*, holotype.
- B. Basal edeagal plate of *Pelocoris femoratus*.
- C. Basal edeagal plate of *Ilyocoris cimicoides*.
- D. Basal edeagal plate of *Naucoris* sp.

*Pronotum*: Comparatively long, glossy, convex, the lateral edges smooth and non-pilose; background color light yellow, surface profusely brown-spotted, the dotting more concentrated centrally, each dot the seat of a shallow puncture; lateral edges very narrowly margined; antero-lateral angles sharp, postero-

lateral angles blunt; lateral curvature slight. Venter whitish-yellow with four brown areas; keel lower than head keel, the two keels forming a distinct discontinuity, with the posterior end of the head keel accordingly appearing elevated; propleura fused to prosternum. Pronotal ratios are:

- (1) Width between anterior angles to width between posterior angles 60: 85 (71%)
- (2) Median length to greatest width 35: 85 (41%)
- (3) Distance between anterior and posterior angles on same side to perpendicular distance between anterior angle and baseline of pronotum 43: 43.

*Scutellum*: Uniformly reddish-yellow in color, with brown-dotting; ratio of three sides, anterior and two laterals, is 50: 38: 38.

*Hemelytra*: Deep reddish-brown to blackish in color, polished, white-punctured, lighter in color on embolia. Embolium long, narrow, rather markedly widened posteriorly, with the posterior margin slanting off oblique-caudad to the lateral edge; embolium not inflated, the lateral margin smoothly and weakly curved; length to width (latter measured at broadest point posteriorly), 52: 15 (30%); lateral emboliar edge narrowly margined, surface otherwise smooth and unbroken. Hemelytra attaining abdominal tip and moderately exposing the broken, spinose, connexival outline; region of the claval sutures smooth and unbroken, the sutures themselves visible only as very faint lines. Hindwings vestigial, non-functional, extending posteriorly only to the junction of abdominal segments I-II.

*Venter*: The prothoracic venter has been discussed above. Venter yellowish colored, that of the abdomen only slightly darker than remainder. Connexival margins broad, progressively spinose from front-to-rear, the postero-lateral angle of abdominal segment I being smoothly appressed against the antero-lateral angle of segment II and accordingly non-spinose; postero-lateral angle of II is slightly protuberant and spinose, that of III moderately so, while IV bears the most prominent spine of all. Abdomen rather strongly, but not sharply, keeled.

The terminal outline of the female subgenital plate is rather distinctive, unlike the same structures in *Pelocoris*; the plate is relatively narrow, somewhat resembling, in this respect, that of *Ambrysus vanduzeei* Usinger, 1946, tapering from a wide base to a narrow, slightly concave tip; the flanks of the plate near the tip bear each a subsidiary point breaking the otherwise smooth lateral outlines (see illustration). There is no sugges-

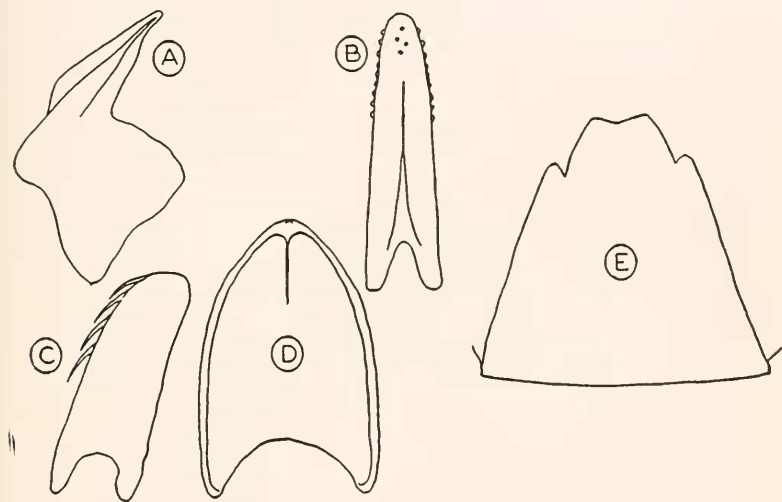


FIGURE 2

A. Right first valva of *Placomerus micans*, allotype, showing valve in lateral view.

B. Fused second valvae of *Placomerus micans*, allotype, dorsal view.

C. Right first valva of *Pelocoris femoratus*, showing valve in lateral view.

D. Fused second valvae of *Pelocoris femoratus*, dorsal view.

E. Subgenital plate of *Placomerus micans*, allotype.

tion of a male genital process on the right lobe of the 5th tergite. Male edeagus long, narrow, pointed, typically and undistinctively leaning to one side; basal edeagal plates complex (see illustration), similar. Female first valvae very distinctive, their construction readily separates *Placomerus* from all related naucorids known to me (see description under generic synopsis above, and also illustration); second valvae fused into a long,



narrow, heavily sclerotized organ set with short, blunt, spine-like tubercles along each lateral margin and with irregularly spaced, median tubercles.

*Legs:* Forelegs yellowish to greenish. Coxae prominent, elongate. Femora markedly incrassate, flattened, ratio of length-to-width 115:68 (60%). Tibiae long, slender, brownish, curving weakly to their single-segmented tarsal points, tibiae-tarsi, when closed, not attaining basal end of femur. Tarsi relatively long compared with most naucorids whose forelegs are of this exaggerated incrassate type.

*Midlegs:* Coxae-trochanters conspicuous and long. Femora generically distinctive, much more flattened than in the genera *Pelocoris* and *Ambrysus*, to name two, and with the dorso-posterior margin flattened into rather flap-like caudal areas medially, areas which are equipped with thick brushes of short pile; the more normal ventro-posterior margins of femora beset with short, reddish spines; ratio of length to width 120:48 (40%), length 1.6 mm. Tibiae distinctively greenish in my specimens, short, stubby, thickly beset with long, reddish spines along margins, spines which may be nearly half as long as the tibiae; a shorter row of spines is borne at each tibial tip; ratio of length to width 72:20 (28%), length 1.0 mm. Tarsi long, narrow, greenish, each tipped with two light amber, nearly straight claws, and with moderate spination below; each tarsus three-segmented, the first segment basal and small.

*Hindlegs:* Broadly similar to the midlegs in general conspectus and color. Femoral ratio of length to width 138:44 (32%), length 2.0 mm.; dorso-posterior margins normal, not flattened and prolonged as in midfemora, both dorso- and ventroposterior edges carrying short, reddish spines. Tibial ratio of length to width 122:22 (18%), length 2.0 mm. Tarsi similar to mid-tarsi, but much larger.

*Material examined:* *Holotype* male, PARAGUAY, Paso-Yobay, Villarrica; *allotype* and 17 *paratypes* from the type locality, collected by F. H. Schade during February, 1952 (from the author's collection); five *paratypes* from BOLIVIA, Santa Cruz, collected by J. Steinbach (Univ. Kansas collection); three para-



types from BRAZIL, Pirassununga, in the State of Sao Paulo, collected by H. Keerekooper in 1941 (No. 313b, Univ. Kansas collection); two paratypes from BRAZIL, Itaquaquecetaba, collected by W. O. Townsend during July, 1933 (Univ. Kansas collection).

*Location of types:* Holotype and allotype in the entomological collection of the California Academy of Sciences, San Francisco, California. Remaining 17 paratypes from the type locality as follows: Ten in the collection of the writer, Reno, Nevada; two each in the Snow Museum of the University of Kansas, Lawrence and in the collection of Robert L. Usinger, Berkeley, California; one each in the collections of the United States National Museum, Washington, D. C.; American Museum of Natural History, New York, N. Y.; British Museum (Natural History), London, England. Four paratypes from Bolivia (above) in the Snow Museum, University of Kansas, and one in the writer's collection. Two paratypes from Brazil (Pirassununga) in the Snow Museum and one in the writer's collection. Two paratypes from Brazil (Itaquaquecetaba) in the Snow Museum.

*Etymology:* From the Latin *micans* meaning "sparkling" or "glittering," in allusion to the high degree of dorsal polish.

*Acknowledgment:* I should like to express my appreciation for the aid given this study by Dr. W. E. China and Dr. R. J. Izzard of the British Museum of Natural History. Their comparison of my material with British Museum types has been most helpful.

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### Nomenclature Notice

All comments relating to the following should be marked with the Commission's File Number and sent to Francis Hemming, 28 Park Village East, Regent's Park, London N.W.1, England.

**Campsicnemus** Haliday, 1851, validation of (Class Insecta, Order Diptera) (File: Z.N. (S) 1080).

For details see Bull. Zool. Nomencl. Vol. 12, Part 6.